

ABSTRACT OF THE DISCLOSURE

A plasma processing apparatus has a plasma processing chamber having a plasma excitation electrode, a radiofrequency generator connected to the plasma excitation electrode, and a matching circuit for matching the impedance between the plasma processing chamber and the radiofrequency generator. The loss capacitance C_{x1} at a later time t_1 after delivery is measured between the plasma excitation electrode and ground potential positions which are grounded. The performance is evaluated by whether or not the loss capacitance C_{x1} is less than 26 times the plasma electrode capacitance C_{e1} at the later time t_1 between the plasma excitation electrode and a counter electrode which cooperate with each other.